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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,064	08/26/2003	Philip D. Nguyen	2002-IP-007693U1	5824
7590	11/22/2005			
Robert A. Kent Halliburton Energy Services 2600 South 2nd Street Duncan, OK 73536			EXAMINER FULLER, BRYAN A	
			ART UNIT 3676	PAPER NUMBER

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/650,064

Applicant(s)

NGUYEN, PHILIP D.

Examiner

Bryan A. Fuller

Art Unit

3676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-21 and 23-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/14/05 & 8/15/05

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This action is in response to the applicant's amendment filed 9/7/2005. Claims 1 – 17, 19 – 21, and 23 - 40 have been finally rejected.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 – 3, 17, 19 - 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDaniel et al (5,547,023) in view of Echols et al (US 2002/0104217).

With respect to claims 1 – 3, 21, 23, and 37 - 40: McDaniel et al teaches in column 1, line 14 – column 6, line 10 a method of controlling the migration of particulates in a well bore comprising the steps of: (a) hydrajetting at least one slot into a zone along a well bore; and, (b) placing a consolidation material comprising proppant particulates into the slot. McDaniel et al does not teach the additional steps of (a) placing an expandable screen in the well bore, the expandable screen having at least a plurality of openings, and the size of at least one of the openings is smaller than the average size of the proppant particulates; and (b) expanding at least a portion of the expandable screen in the well bore relative to the walls of the well bore, and (c) allowing the expandable screen to prevent the migration of at least one proppant particulate into

Art Unit: 3676

the well bore. Echols et al teaches in column 2, line 10 – column 6, line 67 a method wherein the steps of (a) placing an expandable screen in the well bore, the expandable screen having at least a plurality of openings, and the size of at least one of the openings is smaller than the average size of the proppant particulates; and (b) expanding at least a portion of the expandable screen in the well bore relative to the walls of the well bore, and (c) allowing the expandable screen to prevent the migration of at least one proppant particulate into the well bore are taught.

Echols et al also teaches a method wherein the well bore comprises a cased or uncased well bore. Additionally, Echols et al teaches a method wherein the size of the openings in the expandable screen is smaller than both the average size of the proppant particulates and the average size of the formation sands.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified McDaniel et al's invention in view of Echols et al, because the screens that Echols et al describes may also be advantageously utilized in applications where it is not necessary or desirable to expand the well screen. The screen is made of a unique method that provides it with a very desirable thin-walled configuration as well as reducing its complexity and fabrication cost.

3. Claims 4 – 8, 11, 13 – 16, 24 – 28, 31, and 33 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDaniel et al and Echols et al as applied to claims 1, 3, 21, and 23 above, and further in view of Murphey et al (4,665,988).

Art Unit: 3676

With respect to claims 4 – 8, 11, 13 – 16, 24 – 28, 31, and 33 – 36: McDaniel et al and Echols et al teach the features as claimed except for the use of specific compounds as the hardening agent, silane coupling agent, and a surfactant with the hardening resin. Additionally, McDaniel et al and Echols et al do not teach the use of a phenolic resin nor does it teach the use of ethylene glycol butyl ether as a solvent. Finally, McDaniel et al and Echols et al do not teach the use of a specific tackifying material. Murphey et al teaches in column 1, line 53 – column 11, line 26 the use of aromatic amines as a hardening agent, n-beta-(amine-ethyl)-gamma-aminopropyltrimethoxy silane as the silane coupling agent, and mixtures of cationic and non-ionic surfactants. Murphey et al also teaches the use of bisphenol A-epichlorohydrin as the resin and ethylene glycol butyl ether as a solvent. Finally, Murphey et al teaches polysaccharide as a tackifying material. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the combination of McDaniel et al's and Echols et al's method in view of Murphey et al, because the fact that the method of preparing the fill material used in a subterranean formation allows for the maintenance of a desired permeability whereby communication to the formation is maintained and not substantially restricted.

4. Claims 9 – 10, 12, 29 – 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDaniel et al, Echols et al, and Murphey et al as applied to claims 1, 3 – 4, 11, 21, 23 – 24, and 31 above, and further in view of Acock et al (US 2003/0230408).

Art Unit: 3676

With respect to claims 9 – 10, 12, 29 – 30, and 32: McDaniel et al, Echols et al, and Murphey et al teach the features as claimed except for the use of furan-based resin and a specific solvent for the resin. Acock et al teaches in column 5, lines 11 - 37 the use of butyl acetate as a solvent for the resin. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the combination of McDaniel et al's, Echols et al's, and Murphey et al's methods in view of Acock et al, because these solvents reduces viscosity and removes water generated by the condensation of the resin.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1 - 40 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 3676


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan A. Fuller whose telephone number is (571) 272-8119. The examiner can normally be reached on M - Th 7:30 - 5:00 and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian E. Glessner can be reached on (571) 272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3676

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Brian E. Glessner  
Supervisory Patent Examiner  
Art Unit 3676

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